

Practice: 311 - Alley Cropping**Scenario: #1 - Single Row Alley Cropping****Scenario Description:**

The crop or grass land is planted with single rows of trees to increase crop diversity. Final row width, and spacing of trees within the row, is based on farm equipment size, growth form of trees, light needs of annual crop or grass, and intent of the landowner.

Before Situation:

The landscape has been cropped or in perennial grass for many years. It is void of any perennial tree vegetation. The resource concerns are plant condition - inadequate structure and composition.

After Situation:

Single rows of southern red oak trees have been established within a grain sorghum field to diversify the crop production of the field. The area planted is 10 acres on approximately 12' x 40' foot spacing (that is 12 feet between the trees in the row and 40 feet between the rows). The spacing and trees per acre can vary according to the landowner's goals and the site. On cropland site preparation needs may need deep ripping to eliminate any plow pan and on grass land competing vegetation control is accomplished prior to tree planting.

Scenario Feature Measure: Planted tree seedling

Scenario Unit: Each

Scenario Typical Size: 1

Scenario Cost: \$1.08

Scenario Cost/Unit: \$1.08

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$31.63	0.001	\$0.03
Hand tools, tree planting	1590	Various hand tools for digging holes and planting trees such as augers, dibble bars, planting shovel, hoe-dad. Equipment only. Labor not included.	Hour	\$11.62	0.025	\$0.29
Labor						
General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$18.11	0.025	\$0.45
Materials						
Tree, hardwood, seedling or transplant, bare root, 6-18"	1509	Bare root hardwood trees 6-18" tall. Includes materials and shipping only.	Each	\$0.31	1	\$0.31

Practice: 311 - Alley Cropping**Scenario: #2 - 3 row alley cropping****Scenario Description:**

Cropland is planted with trees in 3-row sets with 40 foot alleyways in between. The outside rows of trees are often conifers and the center row a mast-producing high-value hardwood timber species. However, the tree selection can be of any species that is suitable for the site and the landowner's objective. The between row spacing can vary from 8 to 20 feet and between tree spacing should be closer than the row spacing.

Before Situation:

The landscape has been cropped for many years and is void of any perennial tree vegetation. Wind erosion is evident, insufficient water for crops occurs due to excessive winds, wildlife habitat score is very low due to the lack of any perennial vegetation. The resource concerns are Plant Condition - inadequate structure and composition; Soil Erosion (wind); Excess/ Insufficient Water (inefficient moisture management); Inadequate Habitat for Fish and Wildlife (food, cover/shelter, continuity).

After Situation:

A row of southern red oak (spaced 12' apart) is planted between two rows of loblolly pine (spaced 8' apart) within a grain sorghum field to diversify the crop production, reduce erosion by wind and water and improve growing conditions for crops in alleyways. The spacing between the tree rows is 15' and the alleyway is 40' wide. Typically the area planted is 10 acres. The spacing and trees per acre can vary according to the landowner's goals and the site. Site preparation needs may include deep ripping to eliminate any plow pan prior to tree planting or using machine planting.

Scenario Feature Measure: Planted tree seedlings

Scenario Unit: Each

Scenario Typical Size: 1

Scenario Cost: \$0.46

Scenario Cost/Unit: \$0.46

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$31.63	0.001	\$0.03
Hand tools, tree planting	1590	Various hand tools for digging holes and planting trees such as augers, dibble bars, planting shovel, hoe-dad. Equipment only. Labor not included.	Hour	\$11.62	0.01	\$0.12
Labor						
General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$18.11	0.01	\$0.18
Materials						
Tree, conifer, seedling, bare root, 1-0	1512	Bare root conifer trees, 1-0 (1 year old). Includes materials and shipping only.	Each	\$0.06	0.71	\$0.04
Tree, hardwood, seedling or transplant, bare root, 6-18"	1509	Bare root hardwood trees 6-18" tall. Includes materials and shipping only.	Each	\$0.31	0.29	\$0.09